



T&E AGENDA: 5/01/2017  
ITEM: d (4)

## Memorandum

**TO:** TRANSPORTATION AND  
ENVIRONMENT COMMITTEE

**FROM:** Kerrie Romanow  
Barry Ng

**SUBJECT:** SEE BELOW

**DATE:** April 12, 2017

Approved

*D. DSYL*

Date

*4/18/17*

**SUBJECT: SAN JOSÉ-SANTA CLARA REGIONAL WASTEWATER FACILITY  
CAPITAL IMPROVEMENT PROGRAM SEMI-ANNUAL STATUS  
REPORT**

### RECOMMENDATION

Accept the semiannual status report on the San José-Santa Clara Regional Wastewater Facility Capital Improvement Program for the period of July 2016 through December 2016.

### OUTCOME

The purpose of this semiannual status report is to provide an update on the implementation of the Capital Improvement Program (CIP) at the San José-Santa Clara Regional Wastewater Facility<sup>1</sup> (RWF) by highlighting key accomplishments during the first half of fiscal year 2016-2017 to the Transportation and Environment Committee (T&E), the Treatment Plant Advisory Committee (TPAC), and Council.

### BACKGROUND

The San José and Santa Clara City Councils adopted the Plant Master Plan (PMP) in November 2013 and December 2013, respectively. The PMP identified more than 100 capital improvement projects totaling over \$2.1 billion to be implemented at the RWF over the next 30 years. A validation process was completed in early 2014 to update and prioritize the recommended PMP projects and additional gap projects into 33 projects to be initiated over 10 years. Beginning in

<sup>1</sup> The legal, official name of the facility remains San José/Santa Clara Water Pollution Control Plant, but beginning in early 2013, the facility was approved to use a new common name, the San José-Santa Clara Regional Wastewater Facility.

fiscal year 2014-2015, the validation process was used to inform the five-year CIP and ten-year funding strategy. The 2017-2021 adopted CIP includes funding in the amount of \$971 million, of which approximately \$825 million is for construction. To provide visibility and accountability for this significant CIP effort, staff began providing formal semiannual status reports to T&E, TPAC, and Council in spring 2013.

The first semiannual status report was published in April 2013 and it focused on progress and activities from July 2012 through December 2012. Three subsequent semiannual reports were published in October 2013, April 2014, and October 2014. With the establishment of the MWH/Carollo program management team, CIP staff created a new monthly CIP status report to provide more frequent and time-relevant updates. The first CIP monthly status report was issued in April 2014 and 33 monthly reports were issued through December 2016. This semiannual status report is provided to highlight key program and project accomplishments from July 2016 through December 2016 and serves to complement the monthly reports. Copies of the monthly reports are available at <http://www.sanjoseca.gov/Archive.aspx?AMID=190>.

## ANALYSIS

Significant progress was made in several program areas from July 2016 through December 2016.

### *A. Owner-Controlled Insurance Program (OCIP)*

In December 2016, Council approved a master consultant agreement with Alliant Insurance Services, Inc. for broker, administrative, and claim services to evaluate and implement an OCIP for the RWF CIP. An OCIP will enable the City to centrally procure and manage insurance for CIP projects, and offers an opportunity for savings, risk control, and additional safety features. Preliminary estimates indicate that implementing an OCIP may result in a savings ranging from \$300,000 to \$3 million, however, actual savings will need to be re-evaluated after staff obtains actual quotes from insurance providers and makes a final selection on the insurance policies. Alliant will assist staff with preparing a package to market the program and procure quotes for coverage from prospective insurance carriers in early 2017. Staff anticipates bringing a recommendation to implement an OCIP at the RWF to Council for approval in spring 2017.

### *B. Recruitments*

Filling vacant engineering and technical support positions to help deliver the CIP continues to be high priority for the program. Between July 2016 and December 2016, staff filled 10 positions—four associate engineers, two sanitary engineers, an engineer, one senior engineering technician, an engineering technician, and a staff specialist. While staff has been successful in filling many of the entry to mid-level positions, it has been more difficult to attract seasoned wastewater professionals at the senior engineer level, and above. This can be attributed to the highly competitive job market and the limited pool of wastewater professionals that are in high demand both in the public and private sector.



*C. Procurements*

Between July 2016 and December 2016, Council awarded a master consultant agreement for as-needed third-party audit services for CIP projects, awarded two project-specific master consultant agreements and a construction contract as discussed further below. In addition, staff prequalified a company for system integration services and advertised a Request for Qualifications (RFQ) for program-wide industrial hygienist services.

Other notable achievements during this reporting period include the following.

- The Design and Construction Management System (DCMS) was successfully configured and launched. More than 100 City, contractor, and consultant staff have begun using the system to effectively manage Requests for Information (RFIs), submittals, change orders, etc. on two projects. As more projects advance into the construction phase over the next few years, additional project teams will be trained to use the DCMS.
- In September 2016, the RWF received the Utility of the Future Today award from a consortium of leaders from water-sector organizations. The award was given to 61 utilities in the United States, Canada and Denmark for their exceptional performance while working toward more efficient operations.

On the project delivery front, 23 active projects progressed through various stages of the project delivery model.

*A. Feasibility/Development Highlights*

Thirteen projects were in the feasibility/development phase during the first half of fiscal year 2016-2017. Key activities completed during this period include the following.

- Scoping began for the **Tunnel Rehabilitation project**, which was initiated in July. The RWF has an extensive tunnel system that houses piping, equipment, valves pumps, and controls. Many of the tunnels date back to the 1960s and need structural repair, improved ventilation, and removal of obsolete pipelines.
- Condition assessments were completed and several alternative analysis workshops were held for the **Nitrification Clarifiers Rehabilitation, Filter Rehabilitation, and Advanced Facility Control and Meter Replacement projects**. Information from the assessments will help inform the project designs and reduce change orders during their construction.
- **Facility-wide Water Systems Improvements:** Council awarded a master consultant agreement for design services in September.
- **Digested Sludge Dewatering Facility:** Council awarded a master consultant agreement for owner's advisor and construction management services in October.
- **Blower Improvements:** Staff completed a triple bottom line plus (TBL+) analysis in July and the conceptual design in September. The design consultant began work on the preliminary design in November.
- **Headworks Improvements and New Headworks (progressive design-build):** The project team held several technical workshops to complete the alternatives

analysis process in November and began developing the Basis of Design Report for the preferred project alternative in December.

*B. Design Highlights*

Three projects were in the design phase during the first half of fiscal year 2016-2017.

Key activities completed during this period include the following.

- **Headworks Critical Improvements:** The consultant completed the plans and specifications in September. The City advertised the project for bid in November, and opened bids in December.
- **Cogeneration Facility (progressive design-build):** The project team selected engines and a gas purification system in August after holding five workshops on topics such as gas treatment, emissions controls, heating and cooling loops, and landfill gas. After receiving the initial Basis of Design Report and preliminary cost estimate in September, staff conducted a value engineering session to reconfirm scope and functional requirements against available budget. The design-builder submitted a revised Basis of Design Report in December.

*C. Construction Highlights*

Seven projects totaling more than \$146 million were in construction (see Attachment A).

Two of the seven projects are being delivered using the low-bid design-build method, with the remaining five projects being delivered using the conventional design-bid-build delivery method. Key activities completed during this period include the following.

- **Digester and Thickener Facilities Upgrade:** The City held a groundbreaking ceremony on August 24 for the project, the largest CIP project to begin construction thus far. Through December, the project team received more than 250 submittals, 200 requests for information, and 50 process shutdown requests from the contractor. The contractor completed demolition work, including abatement of lead paint, cleaning of the digester structures, and excavation for the sludge processing facility. In October, two major process shutdowns were carried out to investigate pipeline conditions and plan process bypass options revealed major structural damage to a critical 78-inch reinforced concrete effluent pipe and associated concrete chambers. Further investigations will be necessary to determine the amount of necessary repairs and design modifications. Through December, construction was 7.5 percent complete. The project is expected to reach beneficial use in spring 2020.
- **Emergency Diesel Generators (low bid design-build):** In August, the City's Fire Department approved the pressure test for the fuel tanks, belly tanks, and double containment piping, which allowed the filling of the tanks with fuel. Through December, the contractor completed synchronization of the new generators, scheduled PG&E witness testing, and had completed 94 percent of the construction. The project is expected to reach beneficial use in spring 2017.
- **Digester Gas Compressor Upgrade (low bid design-build):** The contractor successfully tested the cooling tower system in October. In November, a process shutdown allowed the contractor to make final tie-in connections of the new



compressor building's gas inlet and discharge pipe to the existing digester gas system. In December, the contractor successfully completed testing of the new compressor and had completed 97 percent of the construction. The project is expected to reach beneficial use in spring 2017.

- **Iron Salt Feed Station:** The contractor completed the site excavation work, subgrade preparation, relocated underground utilities, and constructed form for concrete footings, slabs and walls. The contractor began the concrete pour work on the containment walls in December. Through December, construction was 20 percent complete. The project is expected to reach beneficial use in summer 2017.
- **Construction-Enabling Improvements:** Construction began in August. Through December, the contractor completed the clearing, grading, earthwork, and perimeter fencing. The contractor also completed pavement repairs on Zanker Road. The project is expected to reach beneficial use in spring 2017.
- **Plant Instrument Air System Upgrade:** The project team held a kickoff meeting on October 27. The project is expected to reach beneficial use in spring 2018.
- **Fiber Optic Connection:** Construction began in September. After verifying the conduit path and placing pull boxes, the contractor pulled, spliced, and terminated the fiber optic cable. Acceptance testing was performed in December.

There were no reportable incidents to the State's Division of Occupational Safety and Health (Cal/OSHA) during the first half of fiscal year 2016-2017.

Staff expects to achieve the following during the latter half of fiscal year 2016-2017.

- Evaluate bids for the Headworks Critical Improvement project and obtain Council approval to award the construction contract.
- Continue design and design-build work on five projects: Cogeneration Facility; Blower Improvements; Advanced Facility Control and Meter Replacement; Headworks Improvements and New Headworks; Nitrification Clarifiers Rehabilitation.
- Obtain Council approval to award master consultant agreements for the Support Building Improvements project and program-wide industrial hygienist services.
- Advertise two RFQs to procure an owner's advisor for the Yard Piping and Road Improvements project and a design engineer for the Tunnel Rehabilitation project.
- Advertise an RFQ to prequalify additional firms to provide system integration services.
- Advertise an RFQ to procure a design-builder for the Headworks Improvements and New Headworks project.
- Procure an on-call contractor to perform urgent or unscheduled rehabilitation and/or repair work at the RWF.
- Obtain Council approval to proceed with implementing an OCIP for the RWF CIP.
- Update the Ten-Year Funding Strategy, including for a status update on the availability of Clean Water State Revolving Fund loans.
- Amend the master consultant agreement with MWH for program management services.
- Continue to develop the five-year CIP staffing and transition plan.

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- Continue recruitment activities to fill CIP vacancies.

### **EVALUATION AND FOLLOW-UP**

No follow-up action is required at this time. Staff will continue to provide regular updates to inform T&E, TPAC, and Council of significant changes or issues (particularly as related to rate impacts) as implementation of the CIP progresses. In addition to semiannual presentations, staff continue to share monthly progress reports with TPAC.

### **PUBLIC OUTREACH**

This memorandum will be posted on the City's website for the May 1, 2017 T&E agenda.

### **COORDINATION**

This report has been coordinated with the City Manager's Budget Office.

### **COMMISSION RECOMMENDATION**

This item is scheduled to be heard at the May 18, 2017 TPAC meeting. A supplemental memo with the committee's recommendation will be included in the amended May 23, 2017 City Council meeting agenda.

### **CEQA**

Not a Project, File No. PP10-069(a), Staff Reports / Assessments / Annual Reports / Informational memos that involve no approvals of any City actions.

/s/ Ashwini Kantak for  
KERRIE ROMANOW  
Director, Environmental Services

/s/  
BARRY NG  
Director, Public Works

For questions, please contact Ashwini Kantak, Assistant Director, Environmental Services Department at (408) 975-2553.